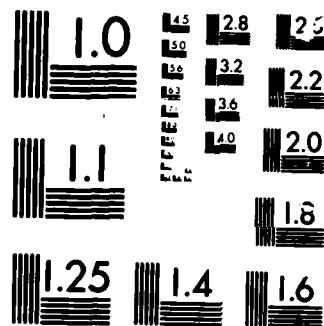


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AD-A167 301

PROCEDURE FOR THE  
DOCUMENTATION OF VESSEL MODIFICATIONS  
  
OCEAN CONSTRUCTION PLATFORM  
SEACON

Prepared for:

Department of the Navy  
Chesapeake Division  
Ocean Engineering and Construction  
Operations Office  
St. Juliens Creek Annex  
Portsmouth, Virginia 23702

In Response to:

Contract N00600-81-D-5270  
Delivery Order 018

Prepared by:

Tracor Marine, Inc.  
P.O. Box 13107  
Port Everglades Station  
Fort Lauderdale, Florida 33316

Project No. 723518  
Report No. 83-723518-2

30 September 1983

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Approved By: Robert S.C. Munier  
Robert S.C. Munier  
Program Manager



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## Tracor Marine



1.0

### INTRODUCTION

Under Contract N00600-81-D-5270, Delivery Order 18-307, Tracor Marine has been tasked with developing a procedure for documenting future vessel modifications which will occur aboard the OCP SEACON. *from Sea-Action Platform* This document presents the procedure by which the modifications can be reported and provides a mechanism for the updating of the SEACON drawing package and the subsequent distribution of the revised materials.



2.0 PURPOSE

The developed procedure is intended to be followed by the personnel responsible for ensuring that the SEACON drawing package accurately reflects the condition of vessel. This will entail cooperation and input from the crew aboard the SEACON, from personnel representing the Ocean Engineering and Construction Office of CHESDIV NAVFACENGCOM, and from CHESDIV's contractor.

The procedure assigns responsibility, provides the appropriate forms and serves as a guide to insure that:

- 1) Modifications to the OCP SEACON are reported.
- 2) The drawings affected by the vessel modifications are updated
- 3) The revised materials are distributed.





3.0 REPORT OF VESSEL MODIFICATION

A. A vessel modification is a permanent alteration of the vessel arrangement; structural members; electrical, piping or HVAC system; or of any of the vendor installed systems aboard the vessel. Temporary removals or installations for the duration of a particular project do not constitute vessel modifications.

B. Vessel modifications shall be reported on the form entitled "OCP SEACON - Report of Vessel Modification", (a sample of the completed form is shown in Figure 1). The First Engineer is responsible for ensuring that a supply of these forms is available at all times. This form should be filled out completely and it should be checked to ensure that it has been dated and signed and that the synopsis is complete.

C. The First Engineer aboard the SEACON is responsible for reporting all vessel modifications. Should a vessel modification be performed by or under the supervision of the Chief Mate, the Electrician or any other personnel, the First Engineer is responsible for supplying the form "Report of Vessel Modification". It is his responsibility to ensure that this form is filled out and returned to him.

D. The report of a vessel modification is to be made immediately following the modification. The First Engineer should retain the "Report of Vessel Modification" aboard the SEACON in a file established for that purpose. A copy of the "Report of Vessel Modification" should be forwarded to the Program Manager at the

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contractor's facility. Additionally, the First Engineer should send a copy of the "Report of Vessel Modification" to each of the other three custodians of the SEACON drawing package.

E. The four custodians of the SEACON drawing package are:

1. The contractor's Naval Architecture Group.
2. Supervisor of the Ocean Engineering and Construction Office at the St. Juliens Creek Annex.
3. Librarian, CHESDIV NAVFACENGCOM, Washington, D.C.
4. First Engineer, OCP SEACON



SAMPLE  
Figure 1  
OCP SEACON

Report of Vessel Modification

Date:

Modified Systems (Check Appropriate):

I. Vessel Arrangements

- A. General
- ☒ B. Machinery
- C. Storeroom and Work Area
- D. Misc.

II. Structural

- A. General
- B. Hull
- C. House
- ☒ D. Foundations

III. Electrical

- A. Power System
- ☒ B. Lighting System
- C. Alarm System
- D. Electronic, communication, Navigation Systems

IV. Piping

- A. Potable Water
- B. Tank Level Indicating
- C. Firemain
- D. Bilge and Ballast
- E. Sea Water Cooling
- F. Fuel Oil
- ☒ G. Compressed Air
- H. Sewage

V. HVAC

- A. Arrangements
- B. Electrical
- C. Schematics and calculations

VI. Vendor Subsystems

- A. Pedestal Crane
- B. Deep Sea Anchor
- C. Gantry Crane
- D. Steering System
- E. Other

Brief Synopsis of Changes:\* (Attach second page if necessary)

An Ingersoll-Rand Air Compressor, Model #10T3NLE15 Serial #30T508823, was installed.

The compressor sits 1 ft. forward of frame 23 and four feet to the portside of centerline. The compressor sits on the longitudinal axis extending 6 feet forward from frame 23.

The electrical wiring is routed from the compressor switch box located on the bulkhead of frame 23 at eye level six inches to the starboard side of the watertight door leading to the aft engine room. The wiring then travels thru the wireway in the overhead passing forward thru the cable deck then out to the weld shop/passageway forward to the Aft Propulsion Room Lighting Panel. It is powered from breaker #10.

\*Include make and model number of key equipment, when applicable

Submitted by: B.W. Sharp

c.c.: G. B. Phillips, R.S.C. Munier  
B.W. Sharp, J. Moody

The compressor is a two stage, three cylinder unit compressing air to a storage tank attached to the compressor. The air leaves the storage tank at the forward end at the top of the tank. All associated piping is threaded 1 inch diameter pipe. The air leaves the tank through a 90 degree globe valve. It passes thru three feet of flex hose. It then run to the overhead then thru a 90 degree elbow turning to the port then running four feet to a 90 degree elbow. It passes aft to a threaded tee connection to tie into the existing air system. The tie in point is in the overhead and centerline with the watertight door for the aft engine room.

The compressor has a moisture separator/drain connection which leaves the bottom of the tank, passes thru the separator at the forward end, leaves the separator and runs aft under the compressor to the bulkhead at frame 23. It passes thru the bulkhead and drains to the waste collection tank in the aft engine room.

The compressor foundation consists of two 'U' frames welded to the deck which the compressor is bolted to.

The forward compressor has been removed. The air system connection has been converted to a service air fitting at this location.



4.0      UPDATE OF DRAWINGS AFFECTED BY VESSEL MODIFICATION

A. Updating the SEACON drawing package will become necessary after major vessel modification or upon the accumulation of numerous minor changes.

B. The Supervisor of the Ocean Engineering and Construction Office is responsible for issuing the task to update the SEACON drawing package. The First Engineer, the contractor's Program Manager or the contractor's Naval Architecture Group may request that the Supervisor evaluate the accumulated "Reports of Vessel Modification". This may be done if any one of them feels that the SEACON drawing package does not generally reflect the condition of the vessel. The Supervisor will then decide whether to update the drawings at that time.

C. The Supervisor of the Ocean Engineering and Construction Office will notify the contractor's Program Manager upon determining that it is necessary to update the SEACON drawing package and request an estimate. The contractor's Program Manager and Naval Architecture Group will then provide the Supervisor with an estimate to update the drawings, the sequential index and the annotated index in the areas affected by the reported vessel modifications. Included in the estimate will be the cost for reproducing the updated drawings on aperture cards, blue lining the updated drawings and copying the updated indexes.

## Tracor Marine



D. Based upon the contractor's estimate, the Supervisor of the Ocean Engineering and Construction Office will issue a work order to the contractor to update the drawings. This will normally involve a ship check of the reported vessel modifications, drafting, marine engineering, naval architecture, project coordination and typing. Additionally, material costs associated with reproducing 3 blue-line copies, 3 sets of aperture cards and 20 copies of the index should be included.

E. Upon receipt of the work order, the contractor's Program Manager will direct the work and ensure that the drawing package is modified as per the accumulated "Reports of Vessel Modification".



5.0 INCORPORATION OF UPDATED DRAWINGS INTO DRAWING PACKAGE

- A. Upon completion of the work order, the contractor's Program Manager will be in possession of 3 sets of aperture cards, 3 blue-line copies of the updated drawings and 20 copies of the updated drawing index. The Program Manager will deliver this material and the form "Notification of Release of Updated Material" to the custodians of the SEACON drawing package.
- B. The form "Notification of Updated Material" will be completed by the contractor's Program Manager. A sample of the completed form is shown in Figure 2. The form "Notification of Release of Updated Material" will list the drawings, aperture cards and indexes which have been released following their revision. The form will also include a list of the outdated material which should be removed from the drawing package and discarded.
- C. It will be the responsibility of the contractor's Program Manager to distribute the updated material and a copy of the "Notification of Release of Updated Material" to the appropriate personnel. The original of the notification will be delivered to the Supervisor along with a set of the updated aperture cards, blue-line copies and indexes. A copy of the "Notification of release of Updated Material" along with a set of the aperture cards, one blue-line copy and 3 copies of the indexes should be delivered to the First Engineer aboard the SEACON, and to the librarian at the Navy Facilities Engineering Command at the Washington Navy Yard. Copies of the index should be distributed to the appropriate personnel by the Supervisor.

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D. It is the responsibility of the designated custodians to incorporate the updated material into the SEACON's drawing package. They should remove the items listed on the "Notification of Release of Updated Material" as outdated and discard them. The material listed on the form as updated should be incorporated into the drawing package in the appropriate position.



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## SAMPLE Figure 2

### OCP SEACON NOTIFICATION OF RELEASE OF UPDATED MATERIAL

Date of Release:

Updated Material (Incorporate):

MEDIUM	DRAWING NO.	REVISION # MO/YR	TITLE	REMARKS
Blue line	1736-200-1	D 8/83	Arrangement of Machinery Spaces	
Blue line	1736-500-16	B 8/83	Schematic, Compressed Air System	
Aperture Card	1736-200-1	D		4 cards
Aperture Card	1736-500-16	B		3 cards
Index	Released 10/83		Annotated and Sequential Index	

Outdated Material:

MEDIUM	DRAWING NO.	REVISION # MO/YR	TITLE	REMARKS
Blue line	1736-200-1	C 7/82	Arrangement of Machinery Spaces	
Blue line	1736-500-16	A 11/82	Schematic, Compressed Air System	
Aperture Card	1736-200-1	C		3 cards
Aperture Card	1736-500-16	A		3 cards
Index	Released 9/82		Annotated and Sequential Index	

Submitted by \_\_\_\_\_  
Program Manager

END

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